MONTHLY WEATHER REVIEW.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for September, 1905, is based on data from about 3495 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 176; West Indian Service, cable and mail, 13; River and Flood Service, regular 52, special river and rainfall, 363, special rainfall only, 98; cooperative observers, domestic and foreign, 2565; total Weather Bureau Service, 3267; Canadian Meteorological Service, by telegraph and mail, 33; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25. Total, 3495.

Since December, 1904, the Weather Bureau has received an average of about 1700 reports from as many observers and vessels, giving international simultaneous observations over the Atlantic and Pacific oceans at 12 noon, Greenwich time, or 7 a. m., seventy-fifth meridian time. These are charted, and, with the corresponding land observations, will form the framework for daily weather charts of the globe.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S.I. Kimball, General Superintendent of the United States Life-Saving Service; Capt. H. M. Hodges, U. S. N. (Retired), Hydrographer, United States Navy; Anastasio Aljaro, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; Señor Enrique A. Del Monte, Director of the the Meteorological Service of the Republic of Cuba; Rev. L. Gangoiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba.

Attention is called to the fact that at regular Weather Bureau stations all data intended for the Central Office at Washington are recorded on seventy-fifth meridian or eastern standard time, except that hourly records of wind velocity and direction, temperature, and sunshine are entered on the respective local standards of time. As far as practicable, only the seventy-fifth meridian standard of time, which is exactly five hours behind Greenwich time, is used in the text of the REVIEW. The standards used by the public in the United States and Canada and by the cooperative observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′, or $10^h\ 30^m$ west of Greenwich. The Costa Rican standard meridian is that of San José, $5^h\ 36^m$ west of Greenwich.

Barometric pressures, whether "station pressures" or "sea-level pressures", are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

In conformity with Instructions No. 43, March 29, 1905, the designation "voluntary", as applied to the class of observers performing services under the direction of the Weather Bureau without a stated compensation in money, is discontinued, and the designation "cooperative", will be used instead in all official publications and correspondence.

Hereafter the titles of the respective forecast districts will be as used in the current REVIEW to accord with paragraph 236 of Station Regulations, dated June 15, 1905.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

Three barometric depressions of moderate intensity influenced the weather of portions of the British coasts during the first and third decades of the month. From the 7th to 10th a depression remained nearly stationary near the north coast of Scotland and then moved slowly eastward to Scandinavia. From the 22d to 26th and 27th to 30th depressions advanced from off the south coast of Ireland to continental Europe. In the vicinity of the Azores the barometer continued comparatively high, except on the 20th, when it fell to 29.82 at Horta, Fayal, with a maximum wind velocity of 30 miles per hour from the southwest. The depressions that passed over the Atlantic from the American Continent were of small intensity.

On the morning of the 6th a disturbance of apparent small diameter appeared to the eastward of Barbados, West Indies; during the afternoon of that day it passed to the westward of Barbados, and by the morning of the 7th had advanced into the eastern Caribbean Sea. The severity of this storm is indicated by the experience of a schooner that sailed from Bridgetown on the morning of the 6th bound for Surinam. When 40 to 50 miles from port the voyage was abandoned on account of heavy seas and high squally winds, and the vessel returned to Bridgetown where it was thrown by heavy seas on the pierhead and totally wrecked, with the loss by drowning of the captain and one of the crew. Advices were issued to West Indian ports regarding the character and probable course of this disturbance on the 6th and 7th. After the 7th it appeared to drift slowly westward over the Caribbean Sea as a shallow depression of considerable area in which no evidence of high winds has been furnished.

The most important storm of the month in the United States occurred over the upper Lake region during the 2d and 3d, attending the passage of low area I; on the north Pacific coast on the night of the 25th; and on the middle coast of the Gulf of Mexico from the 26th to the 30th, attending low area XII. On Lake Superior, damage to shipping and loss of life attended the storm of the 2d and 3d. Damage of a minor character only was caused by the north Pacific storm, and no serious damage has been reported in connection with the Gulf storm. The passage of low area I was attended by severe thunderstorms and rainstorms in the upper Mississippi and lower Ohio valleys and the western Lake region, and by